Prince Albert, Saskatchewan, and Wedgeport, Nova Scotia. The results of these trials were evaluated by the National Technical Advisory Committee on Live Polio Vaccines, a group of Canadian scientists chosen by the Deputy Minister of National Health and Welfare to advise his Department and the Dominion Council of Health on the development and use of the new vaccine in Canada. The Committee reported in November 1961 to the Dominion Council that the trivalent oral polio vaccine, containing the Sabin strains of poliovirus types 1, 2 and 3, was highly antigenic in seronegative individuals and in those who had failed to respond to several doses of Salk vaccine. No ill effects of consequence attributable to the vaccine were observed in the population during and after the vaccination programs. No evidence could be found to indicate any spreading of the polio vaccine virus from the vaccinated population groups to unvaccinated neighbouring communities. The ease of administration of the vaccine and the high rate of its acceptance by the adult population make it particularly suited for mass vaccination. Another advantage of the live oral vaccine lies in the fact that it can be given at the start of or during a poliomyelitis epidemic in order to bring such an epidemic under control.

The Committee recommended that the new live oral polio vaccine should be used in its trivalent form under supervision of the Provincial Departments of Health on a community basis. The use of oral polio vaccine in monovalent form does not warrant the greater cost and administrative difficulty when compared with the use of trivalent vaccine. It is not expected that the oral vaccine will entirely replace the Salk vaccine, at least not within the foreseeable future, since the Salk vaccine with its outstanding success will still be used in combination with other antigens, such as diphtheria and tetanus toxoids and pertussis vaccine for primary immunization programs in infants. The Sabin vaccine will also be useful as a supplementary or booster dose for the majority of persons who already have received a full course of Salk vaccination. In such cases a single dose of the oral vaccine will be sufficient.

In order to obtain complete protection of non-immunized persons against the three strains of virus, at least two doses of trivalent oral vaccine, given at an interval of four to six weeks, are required. It has been found that after the first feeding of a trivalent vaccine only about 60% of seronegative vaccinees develop antibodies to all three types of virus, while over 90% of such persons react promptly to type 2 and 3 poliovirus. Type 1 appears to be less able to establish itself in the alimentary tract in competition with the other two strains. It has also been shown that a current acute infection of the intestinal tract with another enteric virus, such as a member of the Coxsackie group, may reduce the effectiveness of one or more of the vaccine strains, thus leaving the vaccinee with inadequate protection after only one dose of the trivalent polio vaccine. In order to avoid such interference by other enteric viruses, vaccination should preferably be carried out during the winter and early spring, when circulation of these enteric viruses in the population is at a very low rate.

The vaccine will be distributed for the time being through the Provincial Departments of Health in order to make the best possible use of supplies available. It will be used in community-wide vaccination programs which, in the present state of knowledge, provide the most effective method of immunization with an oral polio vaccine. It will be issued in syrup form in 100-dose and 10-dose vials, 0.5 ml. representing a single oral dose. An eye dropper, graduated to a single dose, will be provided with each vial. The vaccine can be dispensed into distilled or de-ionized water or milk, or on a lump of sugar, or it can even be dropped directly into the mouth, depending on the age and preference of the vaccinees.

Judging from the experience in the past, it can be assumed that the acceptance rate of the new vaccine by the population will be above 80%, which is the desirable level of community protection to achieve elimination of poliomyelitis as an epidemic disease. F.P.N.

THE "OFFICIAL" MANUAL OF TUBERCULOSIS

THE eleventh edition of "Diagnostic Standards and Classification of Tuberculosis" has recently been released by the National Tuberculosis Association. While this has always been a valuable monograph, the present edition has been so revised, externally and internally, as to be almost unrecognizable. While the 1955 edition was modestly clothed in a plain buff cover, with black lettering, the present edition is resplendent in red and white, with brilliantly coloured representations of the bronchopulmonary segments and the anatomy of a primary pulmonary lobule, on the inside front and back covers. The volume, familiarly known to tuberculosis workers throughout Canada and the United States as "Diagnostic Standards", has been and continues to be a rather complete exposition of the practical aspects of "the tuberculosis situation", embodying items of information not usually available within the covers of a single volume, and comprising material of value to the general clinician, tuberculosis physician, radiologist, bacteriologist, surgeon, public health official and medical student. In other words, like Francis Bacon, "Diagnostic Standards" "takes all knowledge [concerning

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tuberculosis] as its province". This admirable booklet is published by the National Tuberculosis Association, New York, and is available without charge from your local tuberculosis association.

The present edition differs from the 1955 version in several ways. At first glance, it might appear that the major change has been in the format, but such an impression proves to be inaccurate when the monograph is carefully studied. The 1962 edition has changed materially, and, as is to be expected, the changes are those that have been dictated by changing concepts in the diagnosis and management of tuberculosis and associated diseases during the past seven years. For example, in accordance with the increased emphasis now being placed on the importance of the basic sciences for a thorough understanding of disordered function and disease, the present edition contains a section entitled "The Basic Science Aspects of Tuberculosis". This section consists of three subsections. The first covers the significant anatomy of the respiratory system, including the segmental anatomy of the lung. The subsection on pathology is limited to the morbid anatomy of tuberculosis, while that on physiology emphasizes and epitomizes the newer knowledge of pulmonary function and its measurement. The section on bacteriology of tuberculosis contains a summary of present-day concepts with regard to the "unclassified Mycobacteria", which have increased markedly in importance during the past few years. The section on demonstration of tubercle bacilli now includes some information on laryngeal swabs, tracheal lavage and the use of steam and aerosolized medications to aid in the production of secretions for examination. Further, it emphasizes that bronchoscopy is often helpful in obtaining secretions, not only during the procedure itself, but also for several days afterwards. Newer techniques in the determination of drug susceptibility of various organisms and in the bioassay of isoniazid are also included. In deference to the continuing public controversy regarding the dangers of ionizing radiation, which has grown up during the past few years, there is a carefully balanced, rather temperate short section on radiation hazards. There is a large section on the tuberculin test, a subject which has assumed increasing importance within the past few years, and brief mention is made of the Heaf multiple-puncture test, indicating that "this test is now being investigated". This rather terse statement probably mirrors the present status of the Heaf test in the United States, and perhaps in Canada, but probably constitutes an understatement with respect to the situation in the United Kingdom where, of course, this technique originated. The editors leave no doubt that they still prefer the Mantoux test. The chapter on "Diagnostic Methods for Tuberculosis" includes a short subsection on surgical procedures in diagnosis, which provides information on pleural biopsy, lung biopsy and prescalene and mediastinal node biopsy. All of these procedures have become popular during the past five years and deserve to be included in a new edition of any monograph about chest diseases. From the standpoint of tuberculosis workers especially concerned in the compilation of statistics, probably the most important new departure in the present edition is the reinstatement of the term "quiescent" in the assessment of the status of clinical activity of tuberculosis. This term is to be applied to a class intermediate between "active" and "inactive", and was not utilized in the previous edition. The requirements for this category are negative bacteriologic findings and stable or improving lesions visible by roentgenography, but presence of cavitation is allowed. In this respect, the reinstatement of this term is important because it includes the "open-negative" lesions which are now being seen with increasing frequency. This is another example of the manner in which changes in the response of a disease to treatment have forced the adoption of new methods of classification The committee which prepared this edition, its chairman Dr. William H. Oatway, Jr., the American Thoracic Society and the National Tuberculosis Association, all deserve hearty congratulations for their part in the preparation of this excellent edition of a well-known and valuable monograph. S.J.S.

FOR THE BIRDS

AT every level students who have struggled through the massive volumes of modern textbooks of medicine may often have wished for some irreverence to relieve the gloom of monolithic authority and to lift, even for an instant, the crushing weight of so much erudition. Those who are stirred by such rebellious urges now have their own Maid of Orleans in the person of an unsung volunteer proofreader named Jane Nelson.

According to *Saturday Review* (Trade Winds, January 13, 1962, page 10), a fourth-year medical student was thumbing through the index of Nelson's 1413-page-long "Textbook of Pediatrics" (W. B. Saunders, New York, 7th ed., 1959) when he made a surprising discovery. Between the entries "Bioton, 110" and "Birth, injury, 27, 28, 315-23," his attention was arrested by a remarkable item which read "Birds, for the, 1-1413".

On investigating, he found that this sly thrust at authority had been slipped in by Jane, the author's daughter, while reading galley proofs for her illustrious father. By so doing, she struck a blow for us all; even the harried editor must pause at his labours on the treadmill of terminological exactitude and smile.